



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0154/S-96, REVISION 9

East Building, PHH-23
1200 New Jersey Avenue Southeast
Washington, D.C. 20590

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - QSA Global, Inc. Model Nos. 60001, 60004, 60006, 60017, 60018, 60020, 60021, and 68310.
2. Source Description - Sources are single encapsulations of either Type 304 or 304L seal welded stainless steel. The diameter of all capsules is 6.35 mm (0.25 in.). The length of Model Nos. 60001, 60004, 60017, 60018, 60020, and 60021 is 24.6 mm (0.97 in.); the length of Model No. 60006 is 22.9 mm (0.90 in.); the length of Model No. 68310 is 19.8 mm (0.78 in.). All capsules shall be manufactured in accordance with attached Tech/Ops Drawing No. 60050 or Amersham Drawing No. 60024.
3. Radioactive Contents - Not more than 8.88 TBq (240 Ci) of metallic Ir-192 in Model Nos. 60001, 60004, or 60006. Not more than 4.44 TBq (120 Ci) of metallic Ir-192 in Model Nos. 60017, 60018, 60020, 60021, or 68310.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on July 31, 2012.

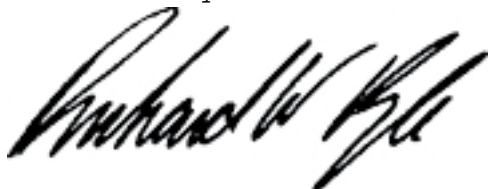
¹ "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

CERTIFICATE USA/0154/S-96, REVISION 9

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the June 19, 2007 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified By:



Jul 05 2007

(DATE)

 Bob Richard

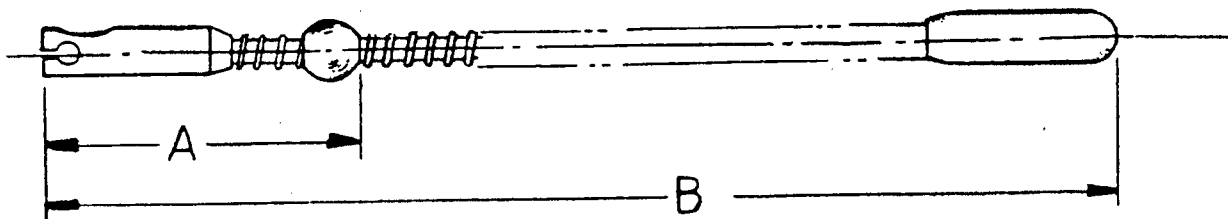
Deputy Associate Administrator for Hazardous Materials Safety

Revision 9 - Issued to extend the expiration date and update the corporate name.

AG0050

REV.	DATE	DESCRIPTION
A	12-18-78	SEE SHEET 2
B	10-15-84	DELETED DWG SIZES FROM DWG #5
C	1 NOV 84	ADDED MODELS 844, 848 & 866

MODEL	CAPACITY (CURIES)	CAPSULE STYLE	DIM A	DIM B
A424-1	120	60001 OR 60004	2.373	7 ⁷ / ₁₆
A424-9	120	60001 OR 60004	1.225	7 ³ / ₁₆
814	120	60001 OR 60004	1.875	7 ³ / ₁₆
68309	120	68310	NOT APPLICABLE; ATTACHED DIRECTLY TO DRIVE CABLE	
69701	120	60001 OR 60004	2.537	7 ¹¹ / ₁₆
A424-20	240	60001 OR 60004	1.225	8 ¹⁵ / ₁₆
A58101	240	60006	NOT APPLICABLE NOT WIRE MOUNTED	
A424-6	120	60001 OR 60004	N.A.	10 ¹¹ / ₁₆
844	120	60017 OR 60018	1.40	6 ¹¹ / ₁₆
848	120	60020 OR 60021	2.56	7.62
866	120	60020 OR 60021	1.44	6.73



MATERIALS



TECHNICAL OPERATIONS INC.
RADIATION PRODUCTS DIVISION
BURLINGTON, MA 01803

FINISH

DWG TITLE

192
IRIDIUM SOURCE REFERENCE

DRAWN BY

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

.X ±

CHECKED BY

.XX ±

.XXX ±

APPROVED BY

ANGLES ±

FRACTIONS ±

CLASSIFICATION

SIZE

DWG. NO.

A

60050

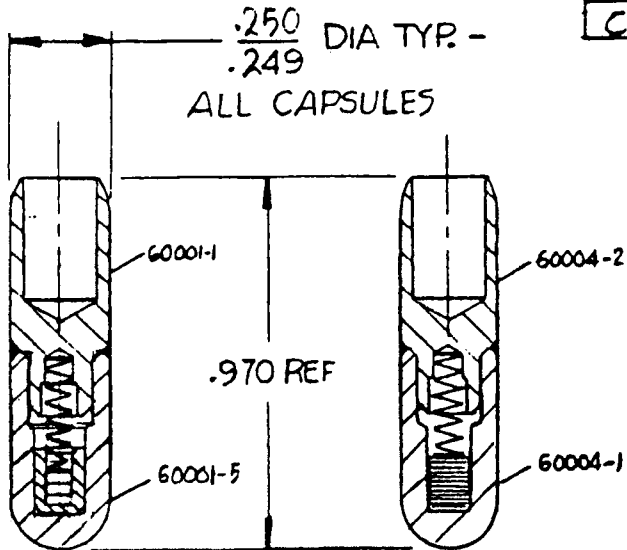
RE

SCALE 1:1

SHEET 1 OF 3

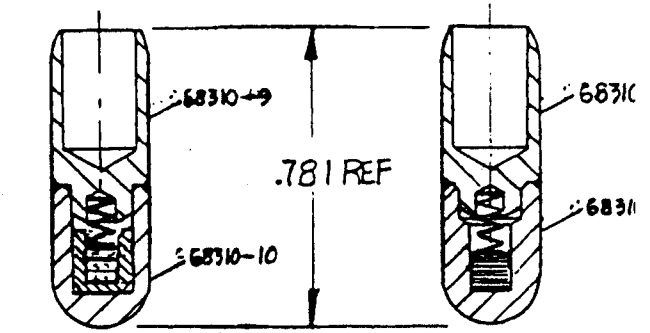
A60050

REV.	DATE	DESCRIPTION
A	12-18-76	ALLOUT BE3310-3 WAS C22310-3 & B60001-2 WAS B66001-2 (ERRORS)
B	9-10-84	60006 REMOVED; ADDED 60020 & 6002
C	1 NOV 84	ADDED 60017 & 60018; ADDED SHT 3



60001

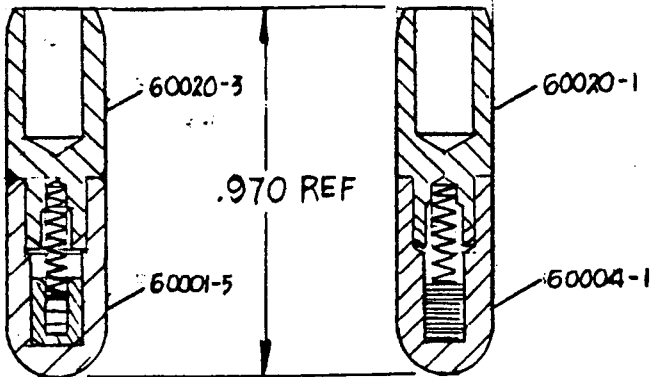
60004



PELLET

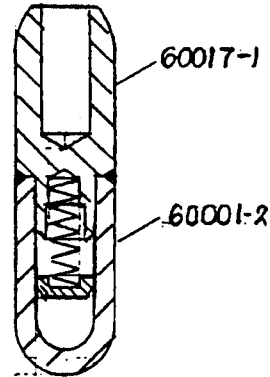
WAFER

68310

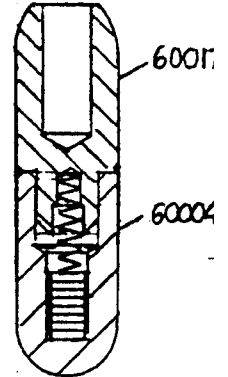


60020

60021



60017



60018

MATERIALS



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RADIATION PRODUCTS DIVISION
BURLINGTON, MA 01803

FINISH

DWG TITLE

192
IRIDIUM SOURCE REFERENCE

DRAWN BY

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

.X ±

CHECKED BY

.XX ±

APPROVED BY

ANGLES ±

FRACTIONS ±

CLASSIFICATION

SIZE

DWG. NO.

A

60050

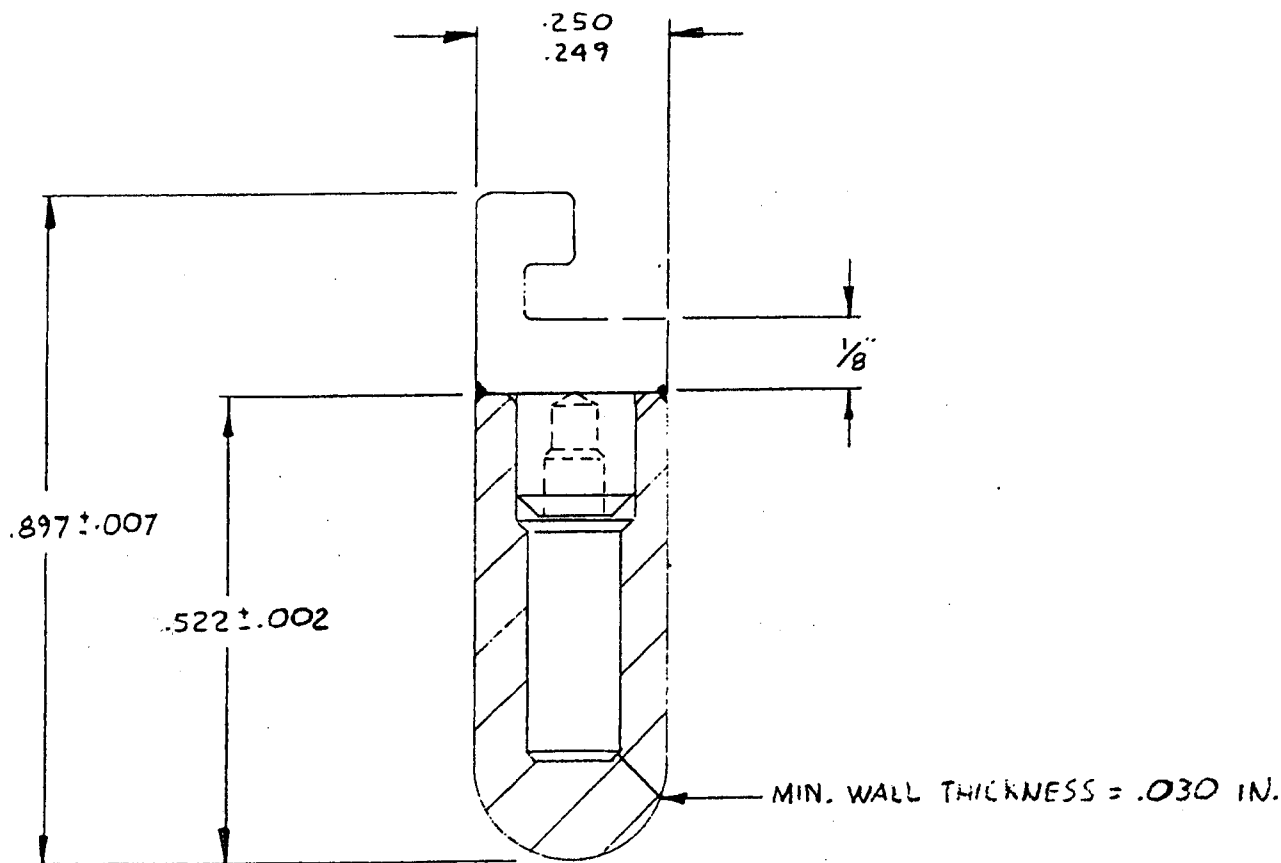
RE

C

SCALE 2:1

SHEET 2 OF 3

REV	ENGINEER	DATE	DESCRIPTION	
A	TA	6/15/93	RELEASED TO PRODUCTION	1396



- NOTES: 1. INTERNAL VOID VOLUME TO BE 0.010 ML OR GREATER.
2. INNER CAVITY DIMS. MAY VARY. METALLIC SPRINGS, SPACERS AND GUARDS WHICH SECURE AND/OR LOCATE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.

USED ON: 600			RELEASED FOR PRODUCTION ON _____ BY _____			
MATERIALS: 304 stainless steel			AMERSHAM CORPORATION BURLINGTON, MA 01803 Amersham			
FINISH			DWG. TITLE			
DATE	6/15/93	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	60006 SERIES CAPSULE DESCRIPTIVE ASSEMBLY			
PREPARED	TA	.X ± 0.1				
ENGINEER		.XX ± 0.01				
CHECKED	DN	.XXX ± 0.005				
APPROVED		ANGLES $\pm 1^\circ$				
FRACT $\pm 1/64$			CLASSIFICATION	SIZE	DWG. NO.	REV
			NA	A	60024	A
SCALE			NTS		SHEET	OF



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CERTIFICATE NUMBER: USA/0154/S-96, Revision 9

ORIGINAL REGISTRANT(S):

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